

Serial No. 10/784,967

Atty. Docket No. 249/449

Amendment dated June 7, 2006Reply to Office action of March 7, 2006

### REMARKS

Prior to entry of this amendment, claims 1-41 are currently pending in the subject application. Claims 1 and 23 have been amended. Claims 1 and 23 are independent.

Claims 1-41 are presented to the Examiner for further prosecution on the merits.

#### A. Introduction

In the outstanding Office action, the Examiner rejected claims 1, 9, 23 and 27 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,361,273 to Kosaka ("the Kosaka reference") in view of U.S. Patent No. 5,920,078 to Frey ("the Frey reference"), rejected claims 22 and 37 under 35 U.S.C. 103(a) as being unpatentable over the Kosaka reference and the Frey reference and further in view of U.S. Patent Publication No. 2002/0181915 to Craig et al. ("the Craig et al. reference"), and indicated claims 2-8, 10-21, 24-26, 28-36 and 38-41 contain allowable subject matter.

#### B. Asserted Obviousness Rejection of Claims 1, 9, 23 and 27

In the outstanding Office action, the Examiner rejected claims 1, 9, 23, and 27 under 35 U.S.C. § 103(a) as being unpatentable over the Kosaka reference in view of the Frey reference. Claims 1 and 23 have been amended to more clearly recite the present invention. These claims are believed to be allowable over the applied art for at least the reasons set forth below.

Claims 1 and 23 now recite, in part, "thereby forming a p-n junction between the doped region and the substrate" and that "the light-emitting device section and the light-receiving device section use the doped region in common." This is clearly shown, for example, in FIG. 2 of the original specification.

In the outstanding Office action, the Examiner relied on a doped region 1 of the Kosaka reference as being used in common for the light-emitting device section and the light-receiving device section, apparently giving no patentable weight to the conversion performed by the doped

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region as recited in claims 1 and 23. Now claims 1 and 23 clearly recite a specific structure formed between the doped region and the substrate. Thus, it is respectfully submitted that this is now clearly a structural limitation, rather than a functional limitation. It is respectfully submitted that the region 1 in the Kosaka reference is a Bragg reflector made of a plurality of n-doped layers on top of an undoped substrate 18. Therefore, it is respectfully submitted that the Kosaka reference fails to disclose or suggest the doped region as now clearly recited in claims 1 and 23.

The Frey reference fails to provide the teaching noted above as missing from the Kosaka. Therefore, it is respectfully submitted that neither the Kosaka reference nor the Frey reference, either alone or in combination, suggest, much less disclose, the present invention as recited in claims 1 and 23.

The remaining rejected claims depend, either directly or indirectly, from respective ones of claims 1 and 23, and are similarly believed to be allowable. Therefore, it is respectfully requested that this rejection be withdrawn.

C. Asserted Obviousness Rejection of Claims 22 and 37

In the outstanding Office action, the Examiner rejected claims 22 and 37 under 35 U.S.C. § 103(a) as being unpatentable over the Kosaka reference in view of the Frey reference and further in view of the Craig et al. reference. Claims 22 and 37 depend from claims 1 and 23, respectively, and are believed to be allowable for at least the reasons set forth above. It is noted that the Craig et al. reference, further relied on in rejecting these claims, fails to provide the teachings noted above as missing. Therefore, it is respectfully requested that this rejection be withdrawn.

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The indication that claims 2-8, 10-21, 24-26, 28-36 and 38-41 contain allowable subject matter is gratefully acknowledged. However, it is respectfully submitted that all of the pending claims are in condition for allowance.

G. Applicant Initiated Interview Request

Applicants appreciate the courtesies extended by Examiner Soward to Applicants' representative in scheduling a personal interview for the above-identified application for June 13, 2006. In the event that June 13<sup>th</sup> personal interview is rescheduled, and a personal interview has not been conducted before the Examiner considers this amendment, applicants request that the Examiner contact applicants' representative and schedule a personal interview. The Examiner's cooperation with this matter is greatly appreciated.

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F. Conclusion

If the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

In view of the foregoing amendments and remarks, reconsideration of this application is earnestly solicited, and an early and favorable further action upon all the claims is hereby requested.

Respectfully submitted,

LEE & MORSE, P.C.

Date: June 7, 2006

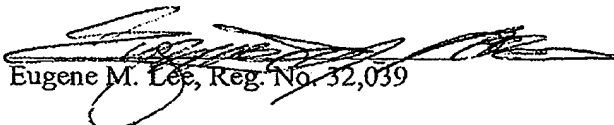
LEE & MORSE, P.C.

1101 WILSON BOULEVARD, SUITE 2000

ARLINGTON, VA 22209

703.525.0978 TEL

703.525.4265 FAX

  
Eugene M. Lee, Reg. No. 32,039

PETITION and  
DEPOSIT ACCOUNT CHARGE AUTHORIZATION

This document and any concurrently filed papers are believed to be timely. Should any extension of the term be required, applicant hereby petitions the Director for such extension and requests that any applicable petition fee be charged to Deposit Account No. 50-1645.

If fee payment is enclosed, this amount is believed to be correct. However, the Director is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-1645.

Any additional fee(s) necessary to effect the proper and timely filing of the accompanying-papers may also be charged to Deposit Account No. 50-1645.